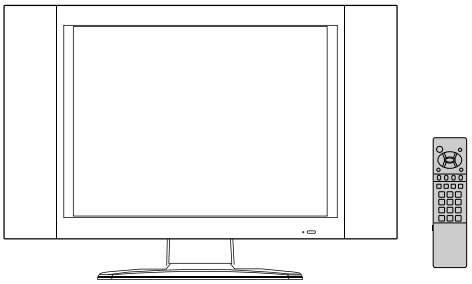
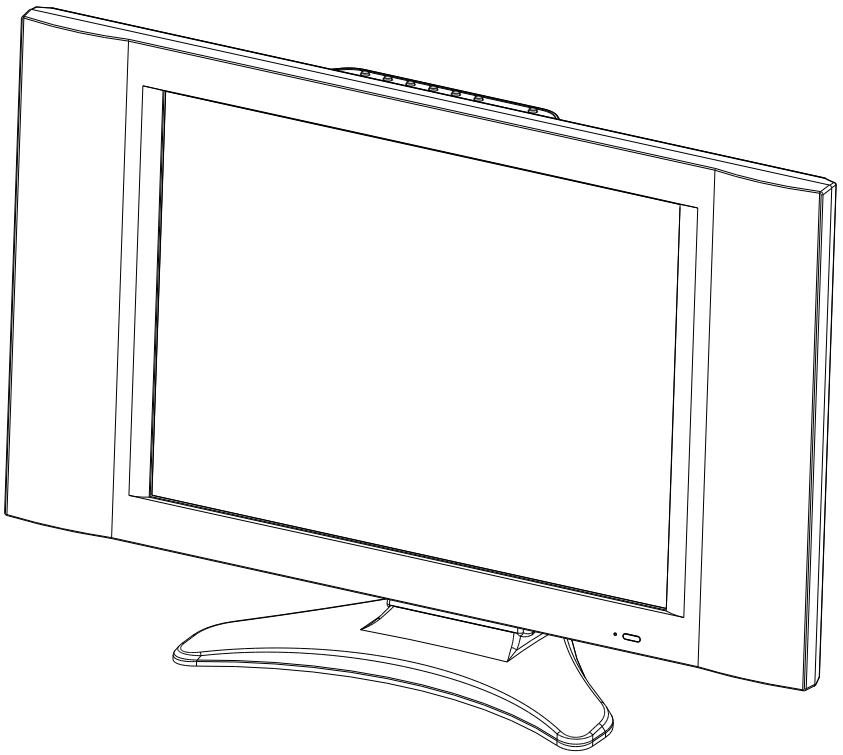


HARWA

LCD TV
Operating Manual

LC-20H3S



Before connecting, operating or adjusting this product, please read the manual completely.
Please keep this manual for future reference.

Table of Contents

Important Safety Precautions....1
Preparations....3
- Using the Remote Control....3
- Batteries for the Remote Control....3
- Power connection....4
- Antenna Connection....4

Identification of Controls....5
- Main unit (front view)....5
- Main unit (rear view)....6
- Remote Control....7

Connections....9
- Cautions before connecting....9
- Connect 21-pin EURO-SCART (AV1 IN)....9
- Connect Audio/Video inputs (AV2 IN)....10
- Connect a PC....11
- Connect a VCR for recording....12

Turning the Unit On and Off....13
- Turning the Unit On and Off....13
- Viewing the Menus and Displays....13

Memorizing the Channels....14
- Storing Channels in Memory Automatically....14
- Storing Channels in Memory Manually....14
- Manual Fine Tuning....15
- Adding and Erasing Channels....15
- Editing Channel Name....15

Basic Operations....16
- Changing Channels....16
- Adjusting the Volume....16
- Select Input Source Signal....17
- Selecting a MENU Language....17

Setting Picture....18
- Customizing the Picture....18
- Using the Preset Picture Mode....18
- WIDE Mode Settings....18

Table of Contents (continued)

Setting System 19
- Setting Blue Screen Background 19
- Setting Color and Sound System 19
- Setting Scart Output 19

Timer Function 20
- Setting Sleep Time 20
- Setting Current Time 20
- Setting On Timer 20
- Setting Off Timer 20

OSD Settings 21
- Setting OSD Position 21
- Setting OSD Background 21
- Setting OSD Timeout 21

Setting Sound 22
- Adjusting Sound Settings 22
- Using the Preset Sound Mode 22
- Loading Preset Sound Settings for Headphone 22
- NICAM Broadcast Selection 23
- IGR (German stereo system) Broadcasts 24

Adjustment in VGA Mode 25
- Customizing the Picture 25
- Customizing the Color Temp 25
- Adjusting the Picture Automatically 25
- Changing the Position of Image 26
- Adjusting the Phase and Frequency 26
- Setting Sleep Time 26

Teletext 27
- What is Teletext 27
- Turning on and off Teletext 27
- Button functions 27

Troubleshooting 28

Specifications 29

Dimensional Drawings 30

Important Safety Precautions

Electrical energy can perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. But IMPROPER USE CAN RESULT IN POTENTIAL ELECTRICAL SHOCK OR FIRE HAZARD. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your LCD TV product, please read the following precautions carefully before using the product.

1. Read these instructions---All operating instructions must be read and understood before the product is operated.

2. Keep these instructions---These safety and operating instructions must be kept in a safe place for future reference.

3. Heed all warnings---All warnings on the product and in the instructions must be observed closely.

4. Follow all instructions---All operating instructions must be followed.

5.Attachments---Only use attachments/accessories specified by the manufacturer. Do not use attachments not recommended by the manufacturer. Use of improper attachments can result in accidents.

6. Power source---This product is intended to be supplied by a listed power supply indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cable system.

7.Power cord protection---Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

8.Overloading---Do not overload wall outlets, extension cords, or convenience receptacles on other equipment as this can result in a risk of fire or electric shock.

9.Entering of objects and liquids---Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.

10. Servicing---Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

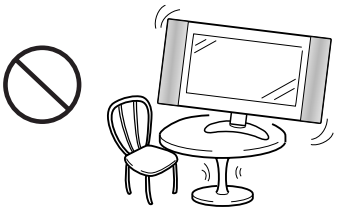
11.Damage requiring service---If any of the following conditions occurs, unplug the power cord from the AC outlet, and request a qualified service person to perform repairs.
a. When the power cord or plug is damaged.
b. When a liquid is spilled on the product or when objects have fallen into the product.
c. When the product has been exposed to rain or water.
d. When the product does not operate properly as described in the operating instructions.
Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.
e. If the product has been dropped or the cabinet has been damaged in any way.
f. When the product displays an abnormal condition or exhibits a distinct change in performance. Any noticeable abnormality in the product indicates that the product needs servicing.

12. Replacement parts---In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.

13. Safety checks---Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.

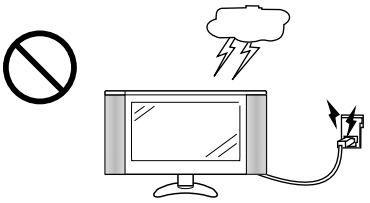
14. Wall or ceiling mounting---When mounting the product on a wall or ceiling, be sure to install the product according to the method recommended by the manufacturer. This is a safety feature.

15. Stand---Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. Do not place the product on an unstable trolley, stand, tripod or table. Placing the product on an unstable base can cause the product to fall, resulting in serious personal injuries as well as damage to the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the mounting hardware recommended by the manufacturer.



16.Careful move---When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. Sudden stops, excessive force and uneven floor surfaces can cause the product to fall from the trolley.

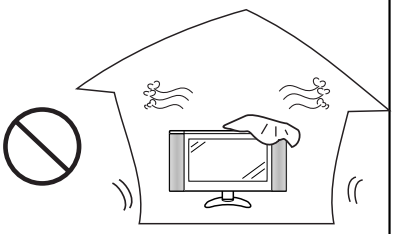
17. Lightning---Unplug this apparatus during lightning storms or when unused for long periods of time.
For added protection for this television equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the equipment due to lightning and power-line surges.



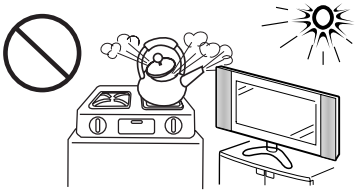
18. Do not use this apparatus near water---for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.
Do not use immediately after moving from a low temperature to high temperature environment, as this causes condensation, which may result in fire, electric shock, or other hazards.

19. Clean only with dry cloth---Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

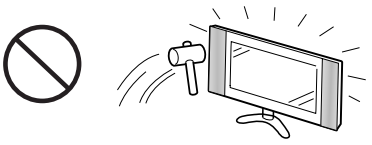
20. Ventilation---Do not block any ventilation openings. Install in accordance with the manufacturer instructions. The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.



21.Heat sources---Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



22.Panel protection---The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or impacted upon by other objects. Be careful not to be injured by broken glass pieces in case the LCD panel breaks.

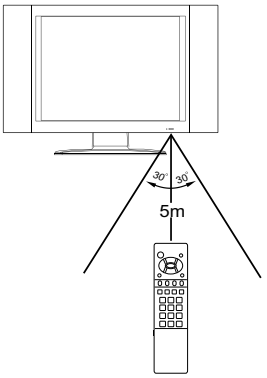


23.Pixel defect---The LCD panel is a very high technology product, giving you finely detailed pictures. Occasionally, a few non-active pixels may appear on the screen as a fixed point of blue, green or red. Please note that this does not affect the performance of your product.

Preparations

Using the Remote Control

■ Use the remote control by pointing it towards the remote sensor window of the set. Objects between the remote control and sensor window may prevent proper operation.



***Note**: the illustration is for your reference only, the remote sensor may locate differently with different model.*

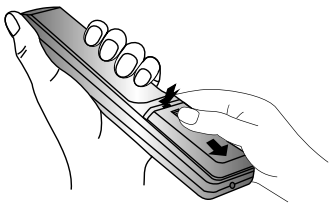
Cautions regarding use of remote control

■ Do not expose the remote control to shock. In addition, do not expose the remote control to liquids, and do not place in an area with high humidity.
■ Do not install or place the remote control under direct sunlight. The heat may cause deformation of the unit.
■ The remote control may not work properly if the remote sensor window of the main unit is under direct sunlight or strong lighting. In such a case, change the angle of the lighting or LCD TV set, or operate the remote control closer to the remote sensor window.

Batteries for the Remote Control

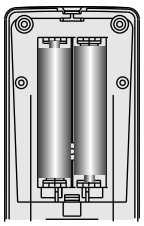
If the remote control fails to operate the LCD TV functions, replace the batteries in the remote control.

1 Open the battery cover.



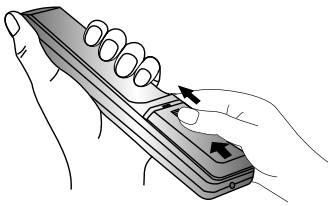
■ (Slide the cover while pressing down.)

2 Insert two size-AAA batteries.



■ (Place the batteries with their terminals corresponding to the (+) and (–) indications in the battery compartment.)

3 Replace the cover and slide in reverse until the lock snaps.

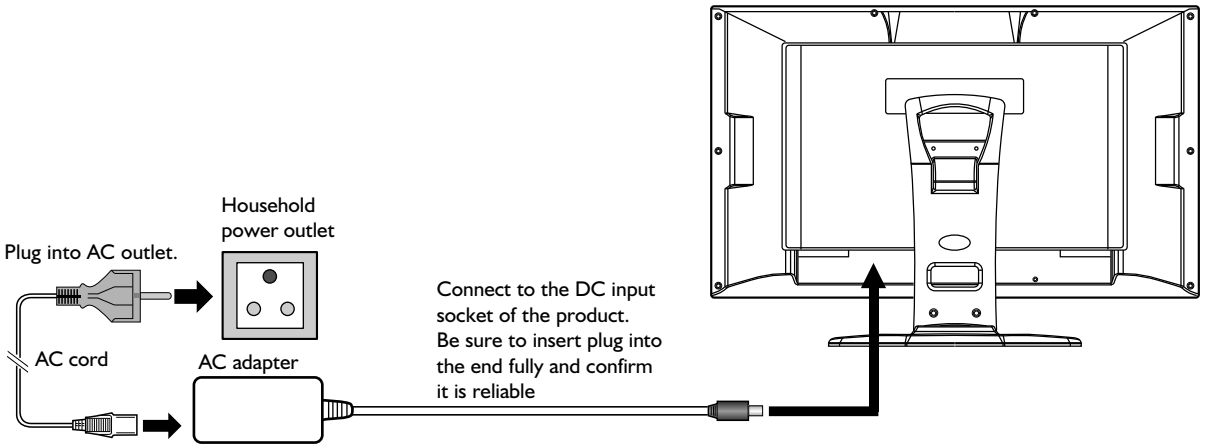


Precaution on battery use

Improper use of batteries can result in a leakage of chemicals and/or explosion. Be sure to follow the instructions below.

■ Place batteries with their terminals corresponding to the (+) and (–) indications.
■ Different types of batteries have different characteristics. Do not mix batteries of different types.
■ Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries and/or cause old batteries to leak chemicals.
■ Remove batteries as soon as they are non-operable. Chemicals that leak from batteries can cause a rash. If chemical leakage is found, wipe with a cloth.
■ The batteries supplied with the product may have a shorter life expectancy due to storage conditions.
■ If the remote control is not used for an extended period of time, remove the batteries from the remote control.

Power connection



1. Connecting the female plug to the AC socket on AC adapter.
2. Connecting the AC adapter to the DC power input of the set.
3. Connecting the male plug to the wall outlet as illustrated.

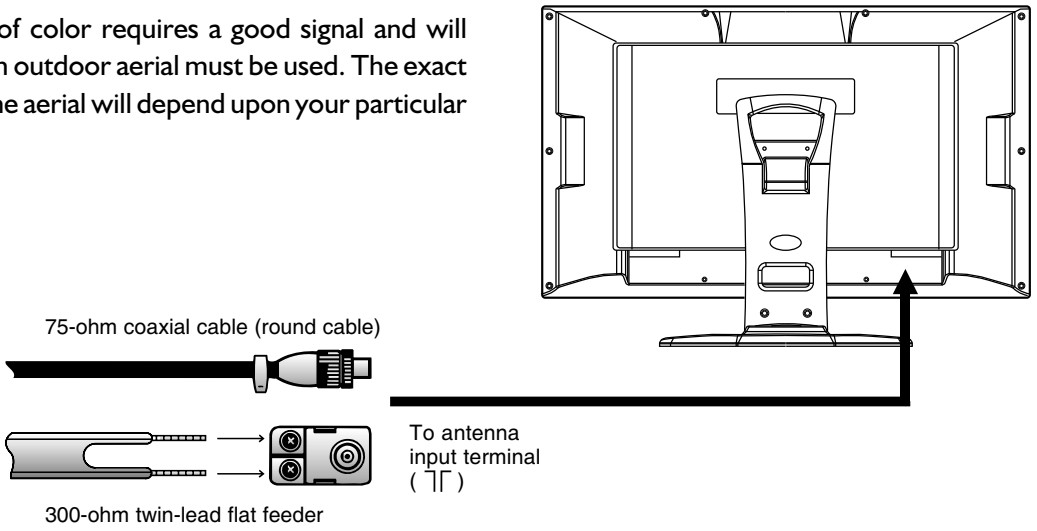
Note:

- *Always turn the Power Switch of the LCD TV set to OFF when connecting the AC adapter.*
- *This product should be operated only from the type of power source indicated on the marking label.*
- *Always unplug the AC adapter from the product and power outlet when not using for a long period of time.*

Antenna Connection

INSTALL the unit in a room where direct light will not fall upon the screen. Total darkness or a reflection on the picture screen may cause eyestrain. Soft and indirect lighting is recommended for comfortable viewing.

Optimum reception of color requires a good signal and will generally mean that an outdoor aerial must be used. The exact type and position of the aerial will depend upon your particular area.

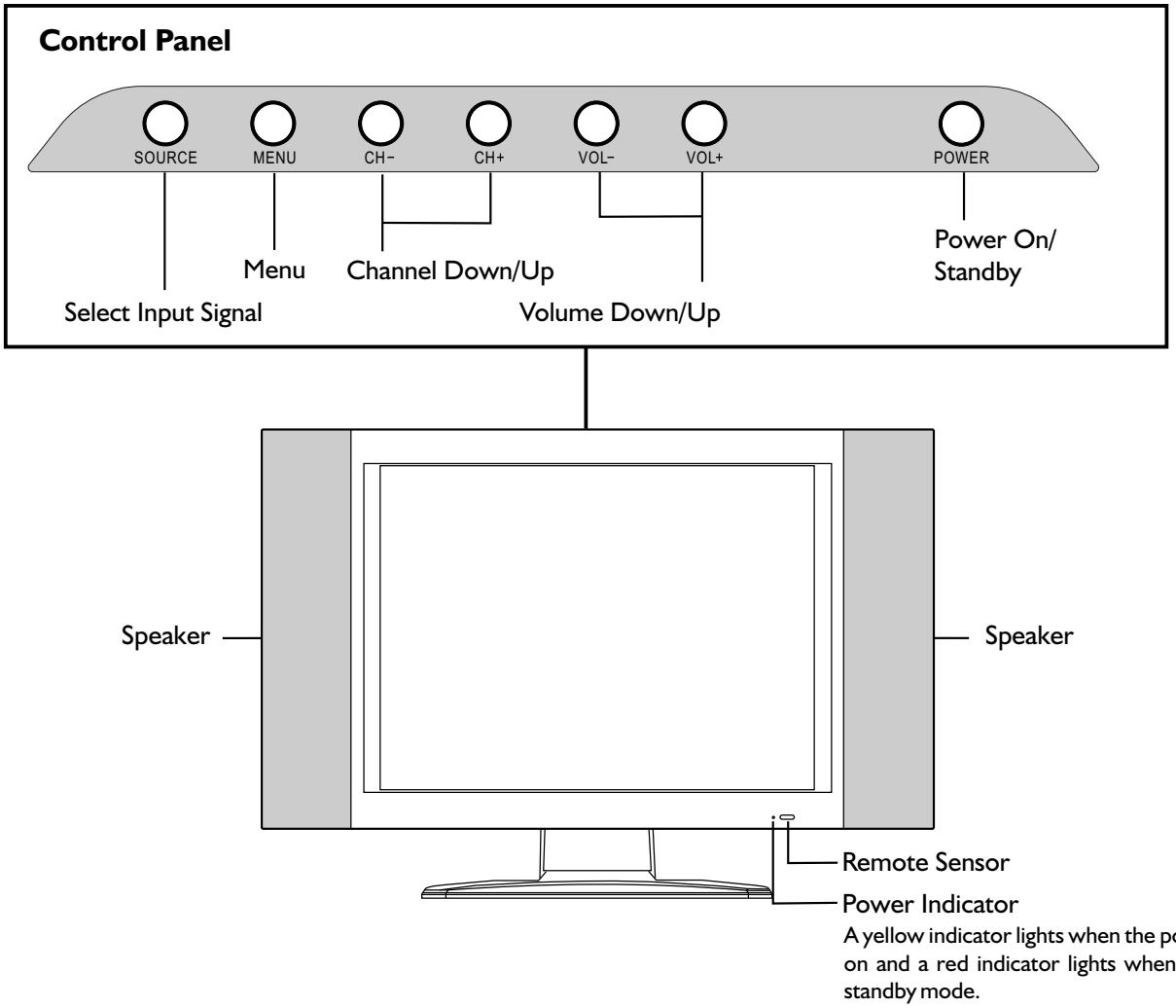


Note:

It is recommended that the 75-ohm coaxial cable be used to eliminate interference and noise which may occur due to radio wave conditions.
The aerial cable should not be bundled with the power cord and the like.

Identification of Controls

Main unit (front view)



A yellow indicator lights when the power is on and a red indicator lights when in the standby mode.

1. SOURCE
To access the SOURCE select menu

2. MENU
Press this button to access the MENU main page.

3. CH +/-
Change the TV channel.
In OSD Menu, press these buttons to choose the OSD items.

4. VOL +/-
Increase or decrease the sound volume level.
In OSD Menu, press these buttons to adjust the value or setting of each item

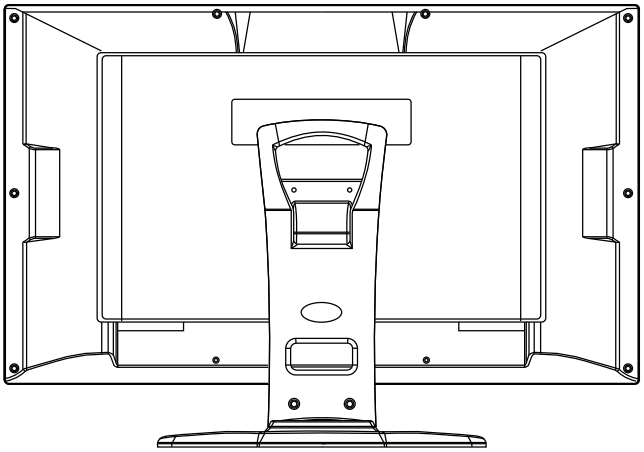
5. POWER
Press this button to turn the unit ON from STANDBY mode. Press it again to turn the set back to STANDBY.

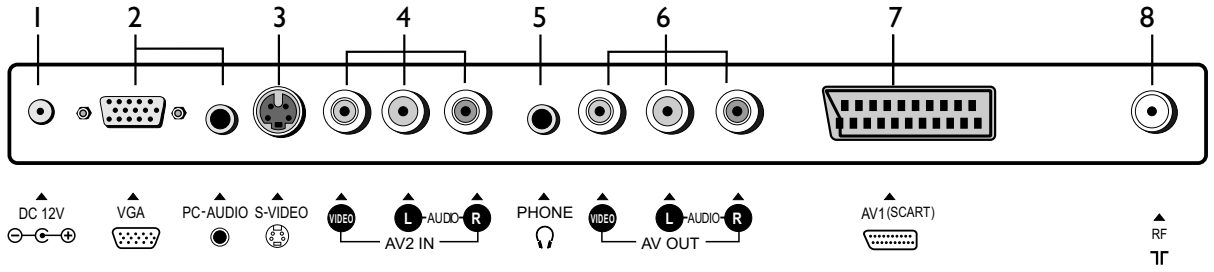
Note:

SOURCE, MENU, CH+/-, VOL+/- *and* ***POWER*** *on the main unit have the same functions as the corresponding buttons on the remote control.*

This operation manual provides a description based on operating functions with the remote control.

Main unit (rear view)

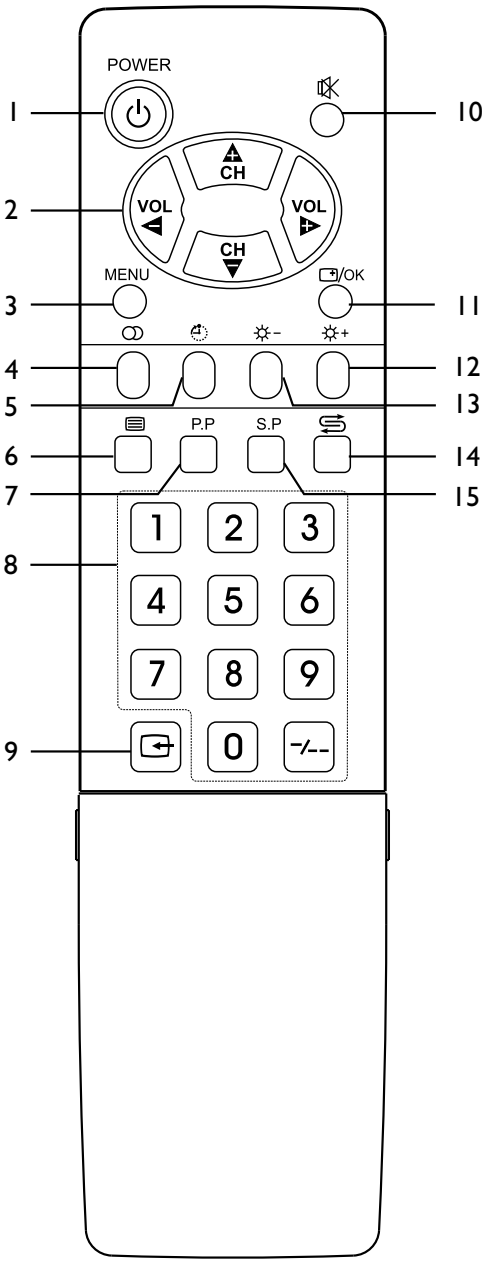


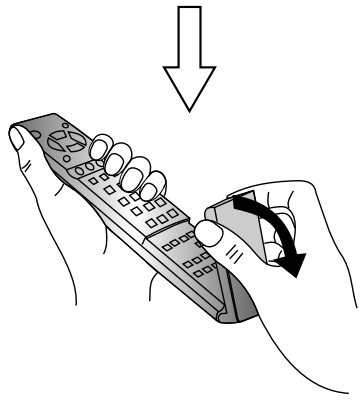


1. **DC POWER input**
   Connect to the DC output of the Power Adapter.
2. **VGA input /Audio in**
   Connect to the VGA/audio output ∅ 3.5mm jacks on your PC.
3. **S-Video input**
   Receive a S-Video signal from external source such as VCR or DVD player.
4. **AV 2 inputs** (Video, Audio L, R)
   Receive video/audio signals from external sources such as VCR or DVD player.
5. **Headphone ∅ 3.5mm jack**
6. **AV outputs** (Video, Audio L, R)
   Connect to the VCR input jacks to record programs.
7. **21-pin Euro-SCART (RGB) interface/AV1 input and Scart output**
8. **Antenna input**

Identification of Controls (continued)

Remote Control

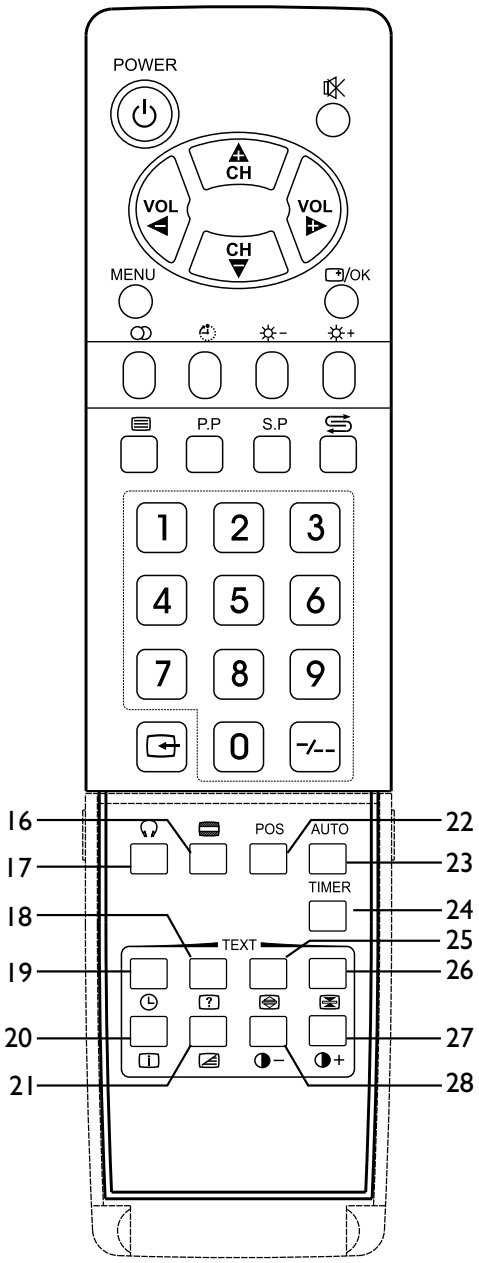




Flip the cover, open in the direction of the arrow.

1. POWER ⏻
   Turn the unit on or standby
2. CH+/-,VOL+/-
   CH+/- ---Use to switch channels;
   To display previous/next page (Teletext)
   VOL+/----Use to adjust volume;
   In MENU operation, use CH+/- to select item and VOL+/- to adjust selected item
3. MENU
   To access the MENU main page
4. STEREO
   To select stereo, mono or bilingual (select Left, Right or Stereo in AV or D-Sub mode)
   Red button (teletext)
5. SLEEP
   To access sleep time setting menu bar
   Green button (teletext)
6. Teletext
   To enter/exit teletext mode
7. P.P
   To select preset picture mode
8. 0～9 digit buttons, -/-- button
   0～9: direct channel select;
   -/-- button: one digit/two digit/three digit channel number selector
9. SOURCE
   To access source select menu
10. MUTE
    Sound mute
11. /OK
    To confirm your operation or setting or to exit menu
    To display channel status or program table
12. ☼+
    To increase brightness
    Blue button (teletext)
13. ☼-
    To decrease brightness
    Yellow button (teletext)
14. RETURN
    To quickly jump between current channel and last selected channel.
15. S.P
    To select preset sound mode

Remote Control



16. SCALER MODE
    To select screen aspect ratio
17. HEADPHONE
    To load preset sound settings for headphone
18. REVEAL
    To display hidden information such as solutions to riddles and puzzles. (Teletext)
19. REAL CLOCK
    To access real time quickly without entering teletext
20. INDEX
    To display index page (Teletext)
21. MIX
    To superimpose text on a TV picture (Teletext)
22. POS
    To quickly select OSD position
23. AUTO
    To adjust picture automatically
24. TIMER
    To access timer menu bar
25. SIZE
    To expand top half or bottom half page of current screen (Teletext)
26. HOLD
    To hold the current teletext page temporarily (Teletext)
27. ◑+
    To increase contrast (Teletext)
28. ◑−
    To decrease contrast (Teletext)

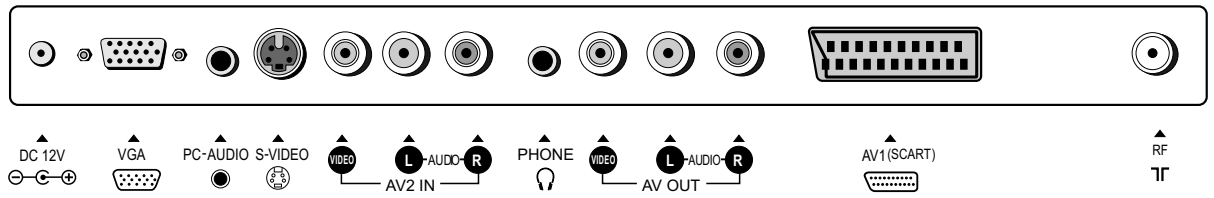
Connections

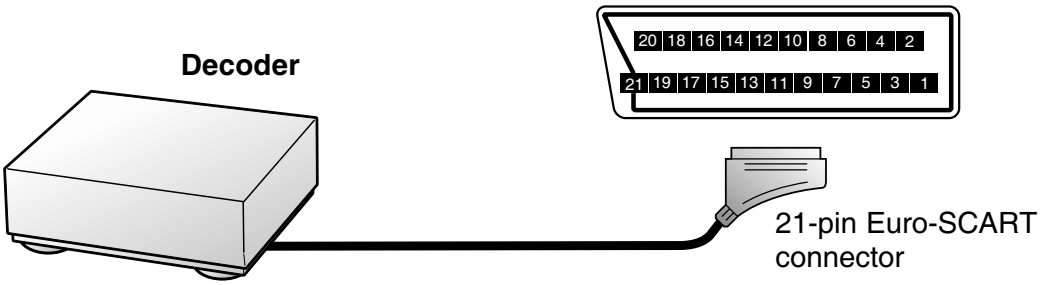
Cautions before connecting

- Carefully check the terminals for position and type before making any connections.
- The illustration of the external equipment may be different depending on your model.
- Loose connectors can result in image or color problems. Make sure that all connectors are securely inserted into their terminals.
- Refer to the operating manual of the external device as well.
- When connecting an external device, turn the power off to avoid any issues.

Connect 21-pin EURO-SCART (AV1 IN)

Interface on the rear of the Unit





21-pin Euro-SCART (RGB)

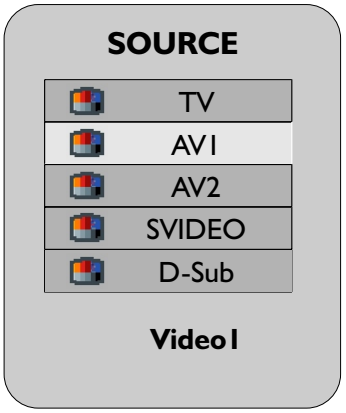
1. Audio right output	8. AV control	15. RED input
2. Audio right input	9. Earth for green	16. RGB control
3. Audio left output	10. Not used	17. Earth for video
4. Common earth for audio	11. GREEN input	18. Earth for RGB control
5. Earth for blue	12. Not used	19. Video output
6. Audio left input	13. Earth for red	20. Video input (PAL/SECAM/NTSC)
7. BLUE input	14. Not used	21. Plug shield

How to connect:

Connect the 21-pin Euro-SCART between the unit and decoder.

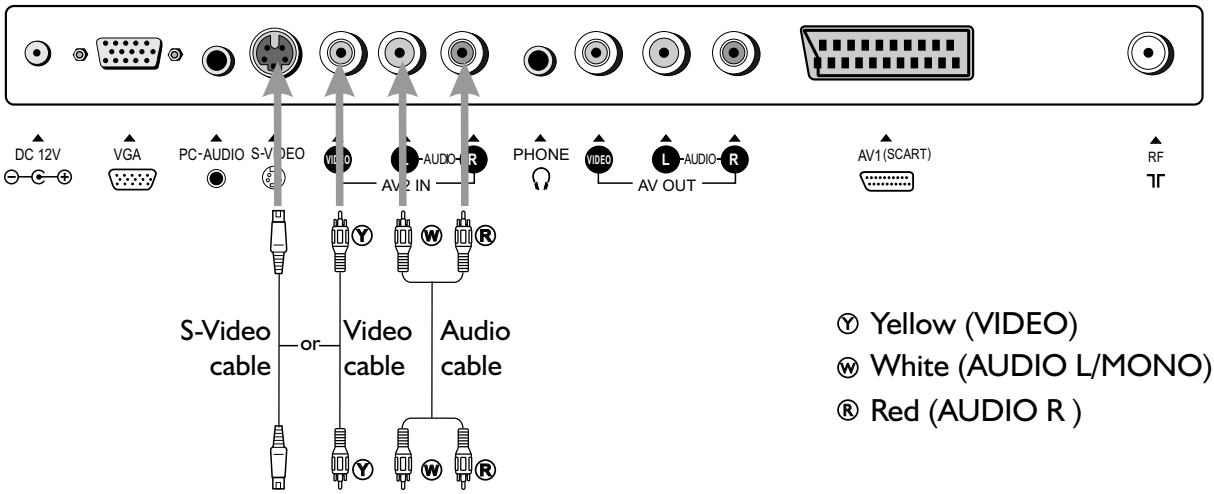
To watch decoder

1. Turn on your LCD TV , press **Source** ⊡ button on the remote control.
2. Press **CH+/-** to select **AV1** and press **VOL+** to confirm or wait for about 5 seconds.
3. Turn on the decoder.
4. Set the ***Scart Output*** item (in **System** menu) to **TV** and select a proper channel through the ***Scart Output Channel*** item. *For detailed operation, please refer to [**Setting Scart Output**] in page19.*



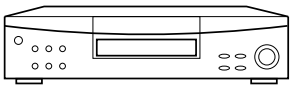
Connect Audio/Video inputs (AV2 IN)

Interface on the rear of the Unit

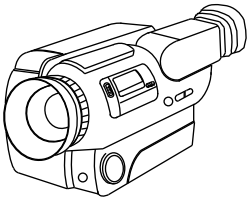


Examples of external devices that can be connected

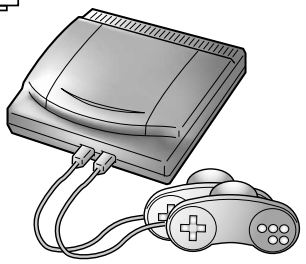
VCR



DVD player



Video Camera



Home video game system

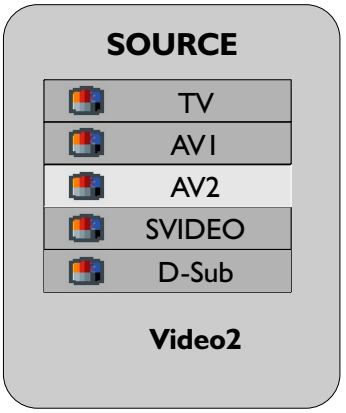
The unit provides Audio/Video inputs for you to connect external devices such as VCR, Video Camera, DVD Player or Home video game system.

How to connect:

Connect the Audio/Video cables between the Audio (L/R)/Video jacks on the unit and external devices.

To view signal from AV2 inputs

1. Turn on your LCD TV , press **Source** ⇥ button on the remote control.
2. Press **CH+/-** to select **AV2** or **SVIDEO** and press **VOL+** to confirm or wait for about 5 seconds.
3. Turn on the external device and play it.



Note:

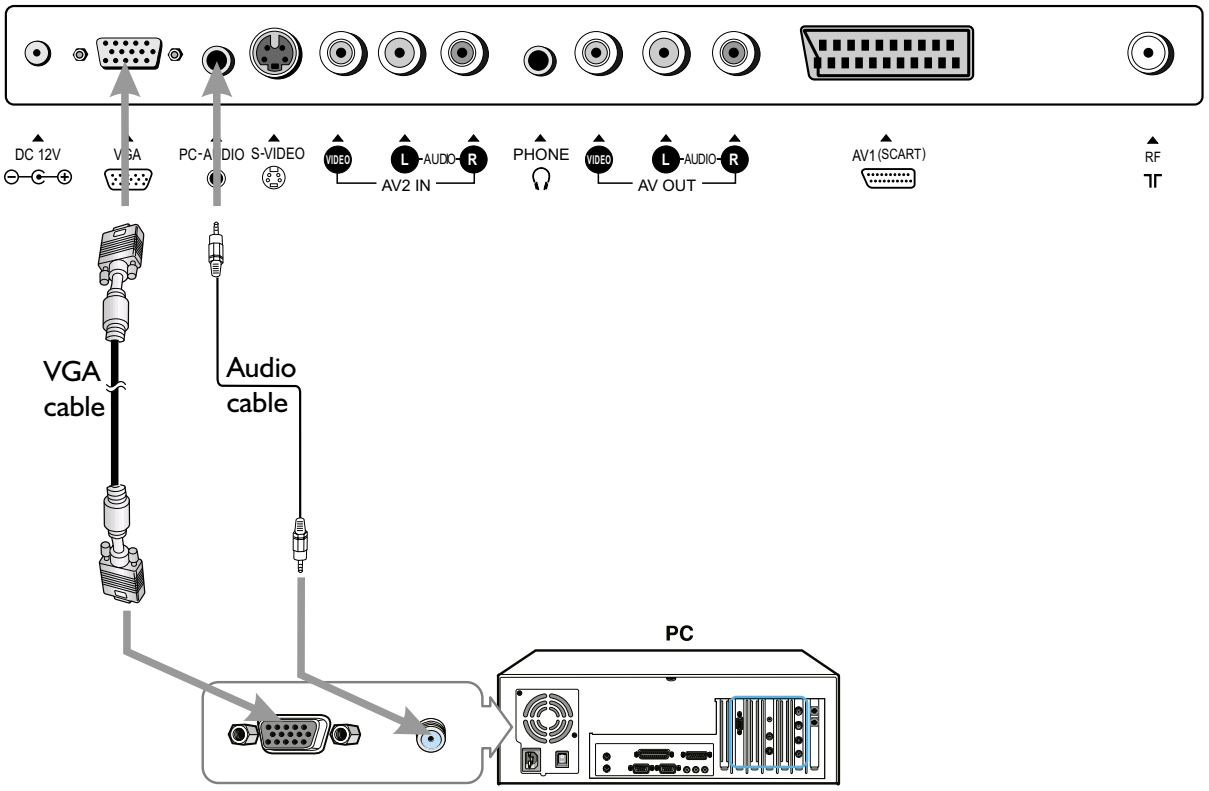
*For better video, you can use the **S-video** terminal if your source supports it. If you are going to use **S-video** terminal, please select **SVIDEO** instead of **AV2** in **SOURCE** menu.*

*The **Video** input terminal on the **AV2 IN** and the **S-Video** input terminal share the same **Audio** input terminals.*

Connections (continued)

Connect a PC

Interface on the rear of the Unit



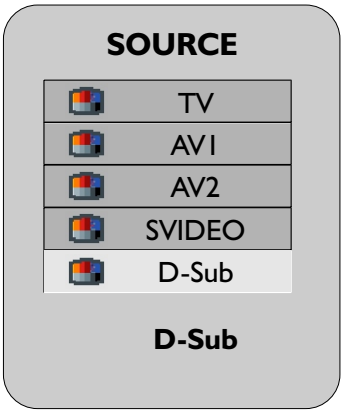
How to connect:

Connect a VGA cable between the VGA jack on the PC and the VGA input jack on the unit.

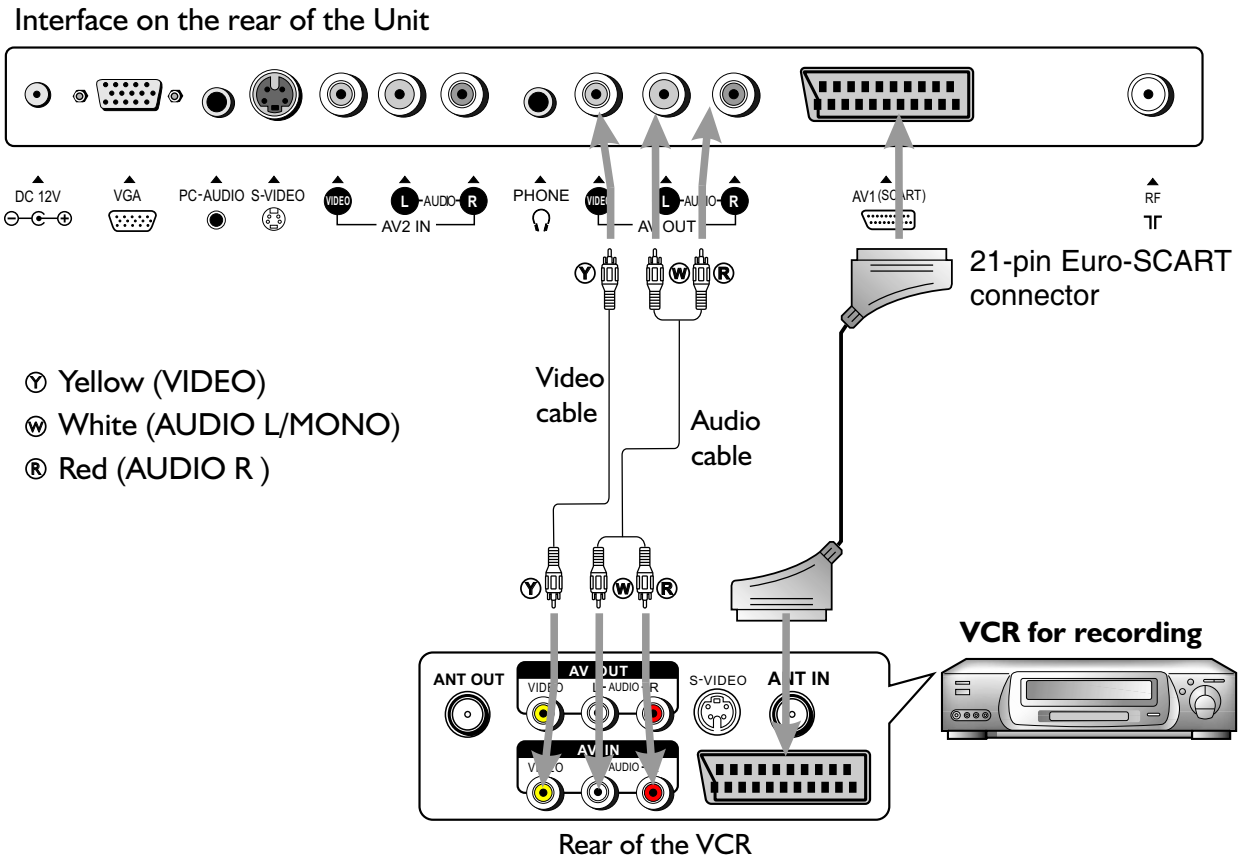
Connect an Audio cable between the AUDIO output on the PC and AUDIO input ∅ 3.5mm jack on the unit.

To Watch the PC screen

1. Turn on your LCD TV , press **Source** ⮆ button on the remote control.
2. Press **CH+/-** to select **D-Sub (VGA IN)**.
3. Press **VOL+** to confirm or wait for about 5 seconds.
4. Turn on your PC and check for PC system requirements.
5. Adjust the PC screen.



Connect a VCR for recording



How to connect:

Connect the Audio/Video cables between the Audio (L/R)/Video jacks on the unit and VCR.

- or -

Connect the 21-pin Euro-Scart between the Scart Interface on the unit and VCR.

To record program (using AV terminals)

1. Turn on your LCD TV, select a program you wish to record.
2. Turn on your VCR, insert a videotape for recording.
3. Press the Record button to begin recording.

To record program (using Scart interface)

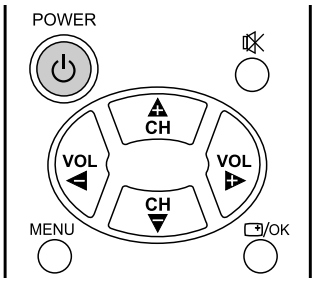
1. Turn on your LCD TV, select a program you wish to record.
2. Turn on your VCR, insert a videotape for recording.
3. Press the Record button to begin recording.

Note:

- *TheVideo output terminal can not output a VGA picture signal.*
- *The Scart can not output VGA picture/sound signals.*
- *When you use the Scart interface to record a program, you can view other program simultaneously. To do this, make sure to set the Scart Output item to a proper selection:*
  *-**TV** for recording a TV program when viewing whatever source.*
  *-**Monitor** for recording what on screen (except a VGA picture), When **Monitor** is selected, you may record the source from which the unit was switched to VGA while you may watch a VGA source simultaneously. For detailed operation, please refer to [**Setting Scart Output**] in page 19.*

Turning the Unit On and Off

Turning On



Insert the power cord into the wall outlet.
Press the **Power** ⏻ button on the remote control.
The unit will be turned on and you will be ready to use it's features.

Turning Off

With the power on, Press the **Power** ⏻ button on the remote control to turn off.

Note:

■ *You can also use the **Power** button on the Control panel on the main unit.*

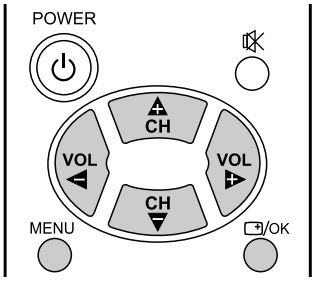
Viewing the Menus and Displays

Your LCD TV has a simple, easy-to-use menu system that appears on the screen. This system makes it convenient and fast to use features on the unit.

Viewing the Menus

1 With the power on, press the **MENU** button on the remote control. The main menu appears on the screen.

2 Use the **VOL+/-** to select menu page. Use **CH+/-** to activate the menu page.



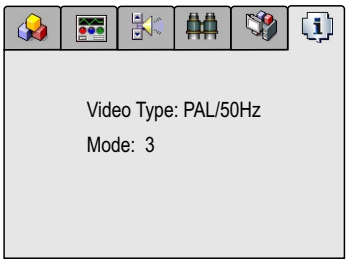
3 Use the **CH+/-** to select item. Use **VOL+/-** to adjust value or setting of each item. Use **OK** to exit menu system.
On-screen menu will disappear from the screen automatically after some seconds (the time can be set by yourself), or you can press the **MENU** button repeatedly to exit the menu system.

Note:

To clearly introduce the menu operations, this operation manual provides a description based on operation with the remote control.

Displaying Status Information

The unit displays current status information (including video type, frequency, resolution or mode) by the **Information** menu page.



1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** repeatedly to display the **Information** menu page.

Press the /OK button on the remote control, the unit will display current status information such as channel number, channel name (if available), etc.

Your LCD TV can memorize and store all of the available channels. After the available channels are memorized, use **CH+/-** to scan through the available channels.

Storing Channels in Memory Automatically

1 Press **MENU** to display the menu main page.

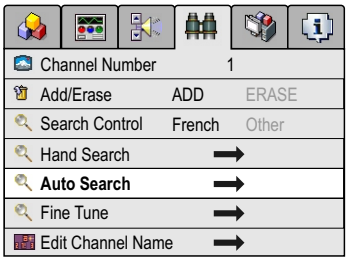
2 Press **VOL+/-** repeatedly to display **Search** menu page.

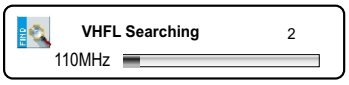
3 Press **CH+/-** repeatedly to select **Search Control** item.

4 Press **VOL+/-** to select **French** or **Other**.
Please select **French** in France, or select **Other** in other country.
The unit searches and memories the SECAM-L/L' programs if you select **French.**

5 Press **CH+/-** repeatedly to select **Auto Search** item.

6 Press **VOL+/-** to store channels in memory automatically.
The unit will begin memorizing all of the available channels.





Note:

- *Before Auto Search, we recommend you to set a proper Sound system according to your local area. (Please refer to **[Setting Color and Sound System]** in this user manual)*
- *The **Search Control** item may not available depending on your model. If the **Search Control** item is found unavailable, the steps 3 & 4 can be skipped.*
- *The process of Auto Search will be stopped if you press the **MENU** button.*
- ***Channel Labeling**: After the Auto Search is finished, the names of those programs with teletext will be added into the program table automatically.*

Storing Channels in Memory Manually

1 Press **MENU** to display the menu main page.

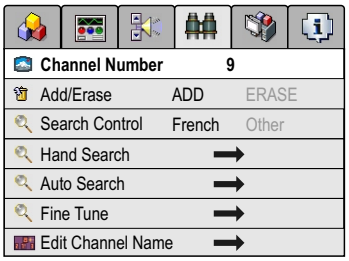
2 Press **VOL+/-** repeatedly to display **Search** menu page.

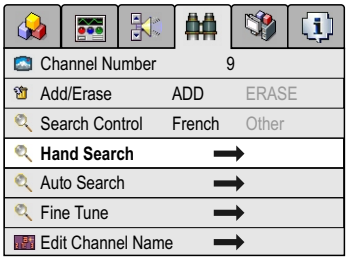
3 Press **CH+/-** to select **Channel Number** item.

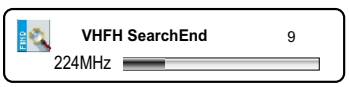
4 Press **VOL+/-** repeatedly to select a channel number you want to store.

5 Press **CH+/-** repeatedly to select **Hand Search** item.

6 Press **VOL+/-** to start searching.
When pressing **VOL-**, the unit searches towards lower frequency;
When pressing **VOL+**, the unit searches towards higher frequency.
When a program is located, the searching stops and the program is stored in the specified channel number.
Repeat the above steps if you want to store another program in other channel number.







Memorizing the Channels (continued)

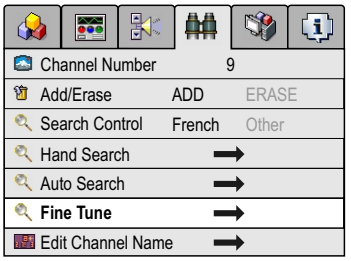
Manual Fine Tuning

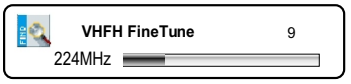
1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** repeatedly to display **Search** menu page.

3 Press **CH+/-** repeatedly to select **Fine tune** item.

4 Press **VOL+/-** to fine tune till the best possible picture and sound are obtained.





Adding and Erasing Channels

1 Use **number buttons** to directly select a channel that will be added or erased.

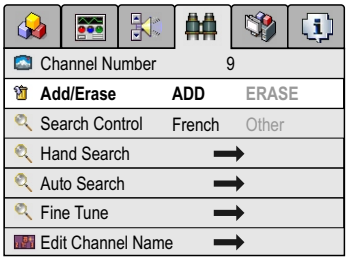
2 Press **MENU** to display the menu main page.

3 Press **VOL+/-** repeatedly to display **Search** menu page.

4 Press **CH+/-** repeatedly to select **Add/Erase** item.

5 Press **VOL+/-** to select **ADD** or **ERASE.**

When **ERASE** is selected, the selected channel will be erased.
When **ADD** is selected, the selected channel will be added.
The erased channels can not be selected by using the **CH+/-** buttons unless you use **number buttons** to input channel number directly.



Editing Channel Name

1 Use **number buttons** to directly select a channel you want to edit its name.

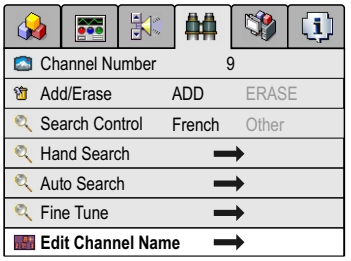
2 Press **MENU** to display the menu main page.

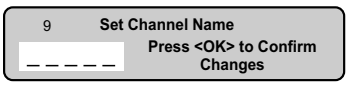
3 Press **VOL+/-** repeatedly to display **Search** menu page.

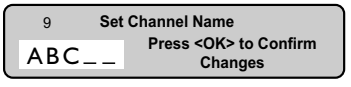
4 Press **CH+/-** repeatedly to select **Edit Channel Name** item.

5 Press **VOL+/-** to access channel name editing page.

Use **CH+/-** to select character.
Use **VOL+/-** to move cursor right or left.
Use **OK** to confirm and return.







Note:

This LCD TV enables you to edit names for up to 112 channels.

Changing Channels

Using the Channel Buttons (CH+ or CH-)

Press the **CH+** or **CH-** to change channels.
When you press the **CH+** or **CH-**, the unit changes channels in sequence. You will see all the channels that the unit has memorized.
You will not see channels that were erased or unavailable.

Direct Accessing Channels

Press the number buttons to go directly to a channel.

To select a one-digit channel:
Input the channel using the **0-9 number button** directly.
To select a two-digit channel:
Press **-/--** to display "--", then input the channel number.
To select a three-digit channel:
Press **-/--** to display "---", then input the channel number.

Note:
Be sure to enter the channel within 3 seconds.
When you use the number buttons, You may directly select channels that were erased.

Using the Return ⮌ button

Press this button to switch between the current channel and the previous channel.

Using the Program Table

This LCD TV enables you to edit names for up to 112 channels and those channels with name can be listed by program table. You can quickly select channel by using program table.

1. Press the ⊡/OK button twice to display the program table.
2. Press **VOL+/-** to select a channel name (the selected channel name displays in red), or you can press **CH+/-** to change page.
3. Press the ⊡/OK button to confirm and the unit goes to the select channel.
4. Press **MENU** to quit the program table.

AAA__ 1	BBB__ 2	ABC__ 3	_____4
_____5	_____6	_____7	_____8
CCTV_9	_____10	_____11	_____12
_____13	_____14	_____15	_____16
_____17	_____18	_____19	_____20
* * * * *	* * * * *	* * * * *	* * * * *
* * * * *	* * * * *	* * * * *	* * * * *

<Up><Down>Change Page <Vol-><Vol+>Choose Item
Page 1. <OK> confirm Action, <Menu> Quit

Adjusting the Volume

Using the volume buttons (VOL- and VOL+)

Press the **VOL +** or **VOL-** to increase or decrease the volume.

Using the Mute

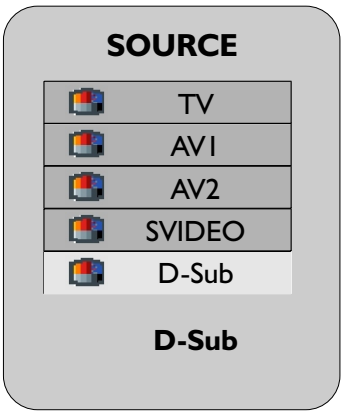
Using the MUTE 🔇 button

At any time, you can temporarily turn off the sound using the **MUTE** 🔇 button.

1. Press the **MUTE** 🔇 button and the sound turns off.
2. To turn mute off, press the **MUTE** 🔇 button again, or simply press either the **VOL -** or **VOL+**.

Select Input Source Signal

Using the Source button



1 Press the **Source** button to access **SOURCE** menu.

2 Press **CH+** or **CH-** to select a desired input signal source.

3 Press **VOL+** to confirm or wait for a moment, the unit display signal from the selected input source.

TV ---------Select TV signal.

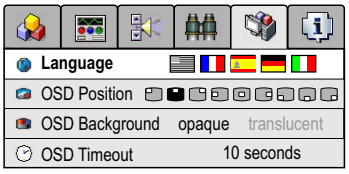
AV1--------Select signal from AV1 input (21-pin EURO-SCART)

AV2--------Select signal from AV2 input terminals.

SVIDEO---Select signal from S-video input.

D-Sub-----Select signal from VGA (15-pin D-sub) interface.

Selecting a MENU Language



1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** repeatedly to display **OSD Settings** menu page.

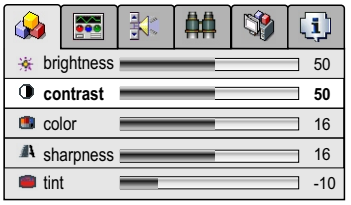
3 Press **CH+/-** to select **Language** item.

4 Press **VOL+/-** to select the appropriate language.

English
French
Spanish
German
Italian

Note:
The OSD means On-Screen Display.

Customizing the Picture



1 Press **MENU** to display the menu main page.

2 If the **Picture** menu does not display, press **VOL+/-** repeatedly to display **Picture** menu page.

3 Press **CH+/-** to select the item you wish to change.

4 Press **VOL+/-** to adjust the value of the item.

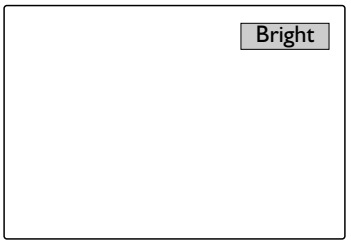
Adjustment item	Press VOL-	Value range	Press VOL+
Brightness	Less bright	0 – 100	More bright
Contrast	Decrease contrast	0 – 100	Increase contrast
Color	Lower color intensity	0 – 32	Higher color intensity
Sharpness	Soft picture	0 – 32	Sharp picture
Tint *	Towards purple	-32 – 31	Towards green

* *The **Tint** item is for NTSC only.*

Note:

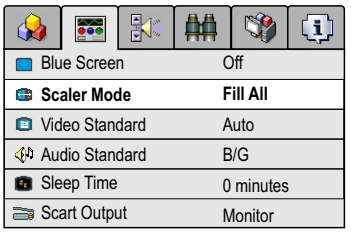
You can quickly adjust the Brightness by using the ☼- or ☼+ button.

Using the Preset Picture Mode



The LCD TV set provides three preset picture modes (**Bright**, **Nature** and **Soft**) and one user-set picture mode (**User**). You can quickly select picture mode by pressing the **P.P** button.
Each preset mode has its own picture settings.
Bright: Select for a bright picture.
Nature: Select for a normal picture.
Soft: Select for a fine/soft picture.
Adjusted settings are stored in **User** mode.

WIDE Mode Settings



1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** repeatedly to display **System** menu page.

3 Press **CH+/-** repeatedly to select **Scaler Mode** item.

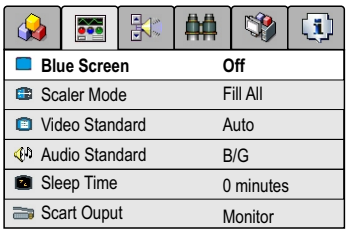
4 Press **VOL+/-** to select **Fill All** or **Wide**.

Fill All
The Fill All mode stretches the input vertically and horizontally to fill the display.
Wide
If the signal is 16:9, this mode acts as if it is in Normal mode.
If the signal is 4:3, the top and bottom sides of the picture are compressed with a black stripe on top and bottom of the screen.

Note:
You can quickly select the Scaler mode by using the button.

Setting System

Setting Blue Screen Background



1 Press **MENU** to display the menu main page.

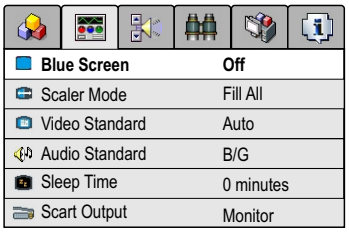
2 Press **VOL+/-** to display **System** menu page.

3 Press **CH+/-** repeatedly to select **Blue Screen** item.

4 Press **VOL+/-** to select **On** or **Off**.

When there is no input signal, a blue background appears if you set this item to **On**. To cancel this function, please set this item to **Off**.
If there is no input signal and the **Blue Screen** is turned on, the unit goes to Standby in 15 minutes automatically.

Setting Color and Sound System



1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** to display **System** menu page.

3 Press **CH+/-** repeatedly to select **Video Standard** item.

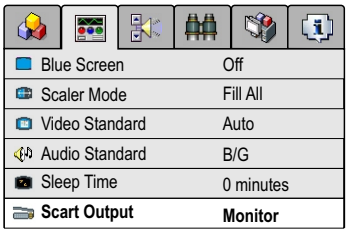
4 Press **VOL+/-** to select a proper **color** system.
Normally, set the **Video Standard** to **Auto**.

5 Press **CH+/-** repeatedly to select **Audio Standard** item.

6 Press **VOL+/-** to select a proper sound system.

Setting Scart Output

The unit allows you to output TV or AV signal through the Scart.



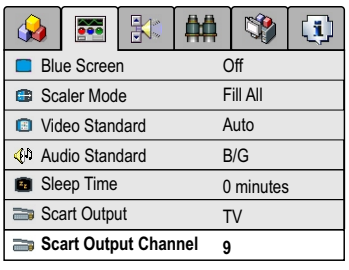
1 With the unit working in AV mode, press **MENU** to display the menu main page.

2 Press **VOL+/-** to display **System** menu page.

3 Press **CH+/-** repeatedly to select **Scart Ouput** item.

4 Press **VOL+/-** to select **TV** or **Monitor**.

When you set this item to **Monitor**, the Scart outputs current screen picture.
When you set this item to **TV**, you select channel through setting the **Scart Output Channel** item, then the Scart outputs TV program of the specified channel.

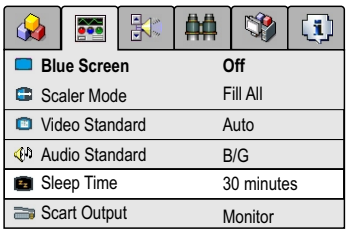


Note:

- *The* **Scart Output Channel** item is available only when the unit works in AV1 mode and the **Scart Ouput** item is set to TV.
- *The* ***Scart Output*** *item is unavailable in TV and VGA mode.*

Setting Sleep Time

Using the Menu



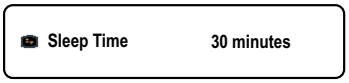
1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** to display **System** menu page.

3 Press **CH+/-** repeatedly to select **Sleep Time** item.

4 Press **VOL+/-** to set a proper sleep time.
The **Sleep Time** can be selected between 0, 10, 20, 30, 60, 90, 120, 180 and 240 minutes.

Using the Sleep button

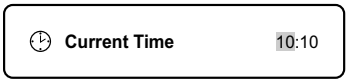


1 Press the **Sleep** button to display **Sleep Time** menu bar.

2 Press **VOL+/-** to adjust.

3 Press the **Sleep** button again to exit.

Setting Current Time



1 Press the **Timer** button to display **Current Time** menu bar.

2 Press **VOL+/-** to select hour or minute.

3 Press **CH+/-** to set.

Setting On Timer

1 With the **Current Time** menu bar displaying on the screen, press the **Timer** button again to display **Turn On** menu bar.

2 Press **VOL+/-** to select hour, minute or status.

3 Press **CH+/-** to adjust.
Press **VOL+/-** to select hour, minute or status. Press **CH+/-** to adjust turn on time and turn on status(Off, Today, Everyday).
Today: the Turn On setting effects today.
Everyday: the Turn On setting effects everyday.

Setting Off Timer

1 With the **Turn On** menu bar displaying on the screen, press the **Timer** button again to display **Turn Off** menu bar.

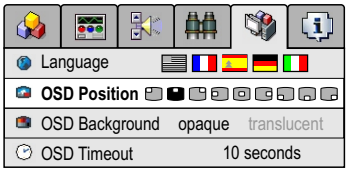
2 Press **VOL+/-** to select hour, minute or status.

3 Press **CH+/-** to adjust.

Press **VOL+/-** to select hour, minute or status. Press **CH+/-** to adjust turn off time and turn off status (Off, Today, Everyday).
Today: the Turn Off setting effects today.
Everyday: the Turn Off setting effects everyday.

OSD Settings

Setting OSD Position



1 Press **MENU** to display the menu main page.

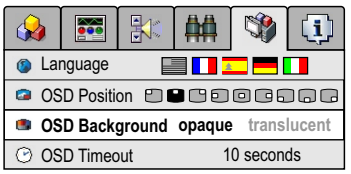
2 Press **VOL+/-** repeatedly to display **OSD Settings** menu page.

3 Press **CH+/-** repeatedly to select **OSD Position** item.

4 Press **VOL+/-** to select a proper OSD position.

Note:
*You can quickly select OSD position by using the **POS** button.*

Setting OSD Background



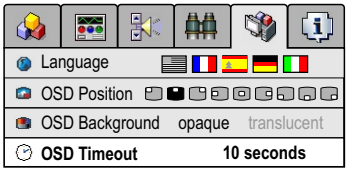
1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** repeatedly to display **OSD Settings** menu page.

3 Press **CH+/-** repeatedly to select **OSD Background** item.

4 Press **VOL+/-** to select **Opaque** or **Translucent.**

Setting OSD Timeout



1 Press **MENU** to display the menu main page.

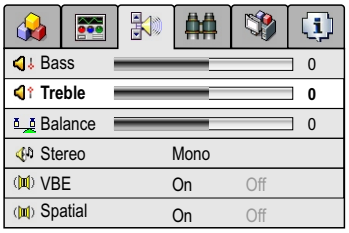
2 Press **VOL+/-** repeatedly to display **OSD Settings** menu page.

3 Press **CH+/-** repeatedly to select **OSD Timeout** item.

4 Press **VOL+/-** to adjust a proper time.

This function enables you to set a time that when you do not perform any operation during this period of time, the OSD disappears automatically upon the time elapses.

Adjusting Sound Settings



1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** repeatedly to display **Audio** menu page.

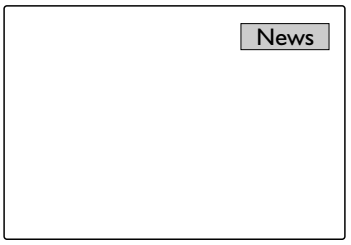
3 Press **CH+**/- to select item you are going to change.

4 Press **VOL+/-** to adjust the value of the item.

Adjustment item	Choice/Value range	Description
Bass	-10 – 10	Adjusting Bass sound effect.
Treble	-10 – 10	Adjusting Treble sound effect.
Balance	-10 – 10	Adjusting sound Balance
VBE	Off ⟷ On	To turn on/off Virtual Bass Enhancement
Spatial	Off ⟷ On	To turn on/off space surround effect
Stereo	NICAM Mono ⟷ Mono NICAM Stereo ⟷ Mono NICAM A ⟶ NICAM B ⟶ Mono FM Stereo ⟷ Mono FM A ⟷ FM B	(* The choices differ depending on whether or not a NICAM or IGR signal is received.) For detail, please refer to next two pages.

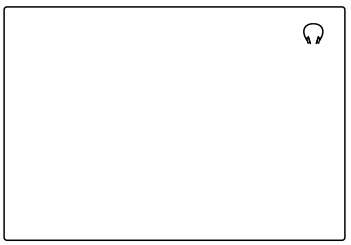
VBE: turn on this function if the signal has a poor bass effect and you hope the unit enhance the bass effect.
Spatial : turn on this function when the unit is located in a small room and you hope the unit produce a space surround effect.

Using the Preset Sound Mode



There are three preset sound modes (**Movie**, **Music** and **News**) and one user-set sound mode (**User**). You can quickly select sound mode by pressing the **S.P** button.
Each preset mode has its own Audio settings (**Treble** and **Bass**).
Movie: Select for a movie program picture.
Music: Select for a music program.
News: Select for a speech or conversation program.
Adjusted settings are stored in **User** mode.

Loading Preset Sound Settings for Headphone



In normal cases, the adjustments of sound settings is for the speakers only. If you want to adjust sound settings for the headphone independently, press the **Headphone** button, a icon appears on the screen and the unit enables you to adjust sound settings for the headphone. The adjusted sound settings will be saved as headphone preset. Next time when you listen with headphone, press this button to quickly load preset sound settings for headphone.

Note:

- *When you do not listen with headphone, please be sure to press the Headphone buttonto quit headphone mode, the icon should disappear.*
- *When you connect a headphone to the headphone jack to enjoy the sound through headphone, the sound of speaker will be muted.*

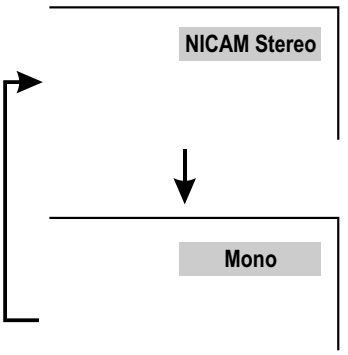
NICAM Broadcast Selection

This enables the selection of the reception mode when receiving a NICAM signal. To let you enjoy NICAM broadcasting, this LCD TV set receives NICAM system stereo, bilingual, and monaural broadcasts.

Stereo

When the LCD TV set is receiving a stereo broadcast.

- Each time you press **STEREO** ⌀, the mode changes between "**NICAM Stereo**" and "**Mono**".
- When "**Mono**" is selected, the TV sound is output monaurally.

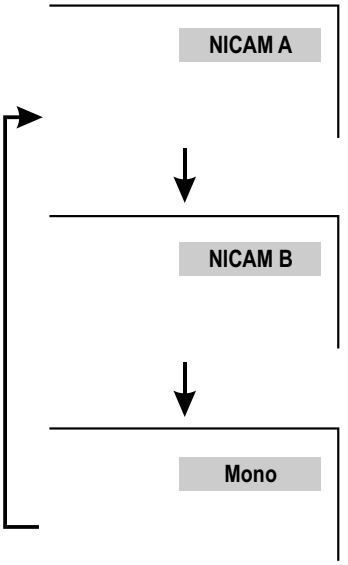


Bilingual

When the LCD TV set is receiving a bilingual programme.

- Each time you press **STEREO** ⌀, the mode changes as follows:

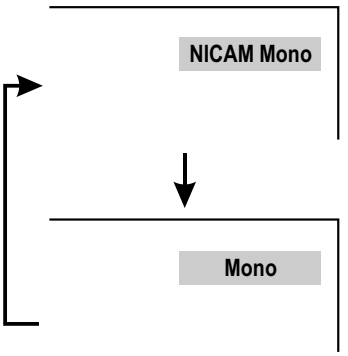
NICAM A ⟶ NICAM B ⟶ Mono



Monaural

When the LCD TV set is receiving a NICAM monaural broadcast.

- Each time you press **STEREO** ⌀, the mode changes between "**NICAM Mono**" and "**Mono**".



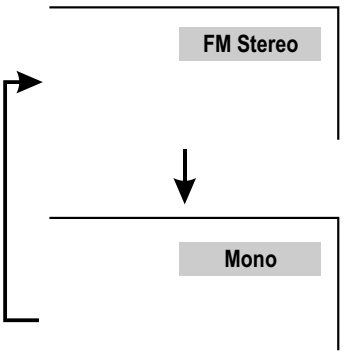
IGR (German stereo system) Broadcasts

This enables the selection of the reception mode when receiving an IGR signal. To let you enjoy IGR broadcasting, this LCD TV set receives IGR system stereo and bilingual broadcasts.

Stereo

When the LCD TV set is receiving a stereo broadcast.

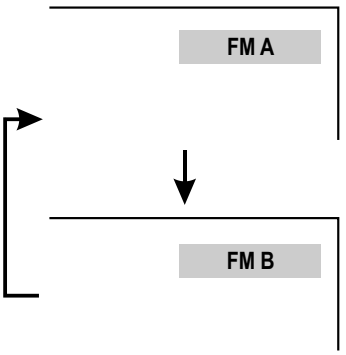
- Each time you press **STEREO** ∞, the mode changes between "**FM Stereo**" and "**Mono**".
- When "**Mono**" is selected, the TV sound is output monaurally.



Bilingual

When the LCD TV set is receiving a bilingual programme.

- Each time you press **STEREO** ∞, the mode changes between "**FM A**" and "**FM B**".



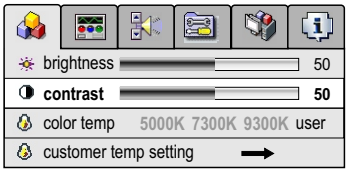
Note:

- *The selection of **Stereo Mode** can be performed by directly pressing the **STEREO** ∞ button or using the **Audio** menu.*
- *With working in AV (SVIDEO) or VGA mode, the selection of **Stereo Mode** is between **Left, Right** or **Stereo.***

Adjustment in VGA Mode

With working in VGA mode, this unit allows you to perform several adjustments.

Customizing the Picture



1 Press **MENU** to display the **Picture** menu main page.
If the **Picture** menu does not display, press **VOL+/-** repeatedly to display **Picture** menu page.

2 Press **CH+/-** to select the item you wish to change.

3 Press **VOL+/-** to adjust the value of the item.

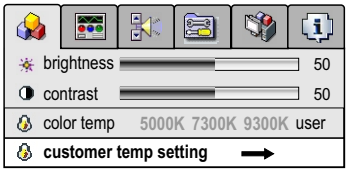
4 Press **MENU** to exit.

Adjustment item	Press VOL-	Value range	Press VOL+
brightness	Less bright	0 – 100	More bright
contrast	Decrease contrast	0 – 100	Increase contrast
Color temp	—	5000K, 7300K, 9300K, User	—
customer temp setting	Press VOL+ or VOL- to access the submenu to adjust RGB individually.		

Note:
*You can quickly adjust the **brightness** by using the ☼- or ☼+ button.*

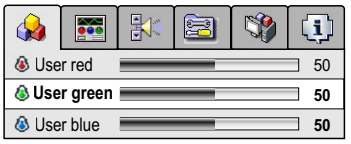
Customizing the Color Temp

You need to set the **Color Temp** item to **User** if you want customize **color temp** by yourself.



1 Press **MENU** to display the **Picture** menu main page.
If the **Picture** menu does not display, press **VOL+/-** repeatedly to display **Picture** menu page.

2 Press **CH+/-** repeatedly to select the **customer temp setting** item.



3 Press **VOL+/-** to access the submenu.

4 Press **CH+/-** to select the **User red, User green** or **User blue** item.

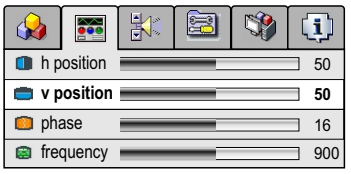
5 Press **VOL+/-** to adjust item.

Adjusting the Picture Automatically

If you are not satisfied with the picture , you may quickly adjust the picture by using the **AUTO** button.
After the **AUTO** button is pressed, the picture adjustments are automatically activated.

Changing the Position of Image

After connecting the unit to your PC, adjust the position of the screen if it is not well-aligned.



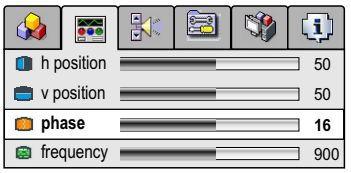
1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** repeatedly to display **Screen** menu page.

3 Press **CH+**/- to select **h position** or **v position** item.

4 Press **VOL+/-** to adjust the value of the item until the screen is well-aligned.

Adjusting the Phase and Frequency



1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** repeatedly to display **Screen** menu page.

3 Press **CH+**/- to select **phase** or **frequency** item.

4 Press **VOL+/-** to adjust the value of the item.

You may find that images blur, depending on the clock phase of your PC's Processor. If you experience blurring , you can obtain a clearer image by adjusting the phase setting.
Adjust the clock frequency of the set's internal clock signal. If shimmering or rainbow-like noise is apparent in the image, try adjusting the frequency setting.

Setting Sleep Time

Using the Menu

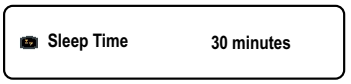
1 Press **MENU** to display the menu main page.

2 Press **VOL+/-** repeatedly to display **Tools** menu page.

3 Press **CH+/-** to select **Sleep Time** item.

4 Press **VOL+/-** to set a proper sleep time.
The **Sleep Time** can be selected between 0, 10, 20, 30, 60, 90, 120, 180 and 240 minutes.

Using the Sleep button



1 Press the **Sleep** button to display **Sleep Time** menu bar.

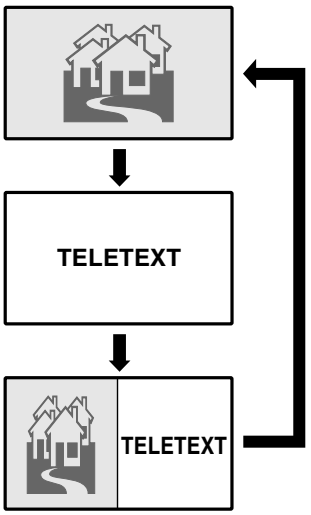
2 Press **VOL+/-** to adjust.

3 Press the **Sleep** button again to exit.

Teletext

What is Teletext?

Teletext broadcasts pages of information and entertainment to specially equipped television sets.
Your System receives Teletext signals broadcast by a TV network, and decodes them into graphical format for viewing. News, weather and sports information, stock exchange prices and programme previews are among the many services available.

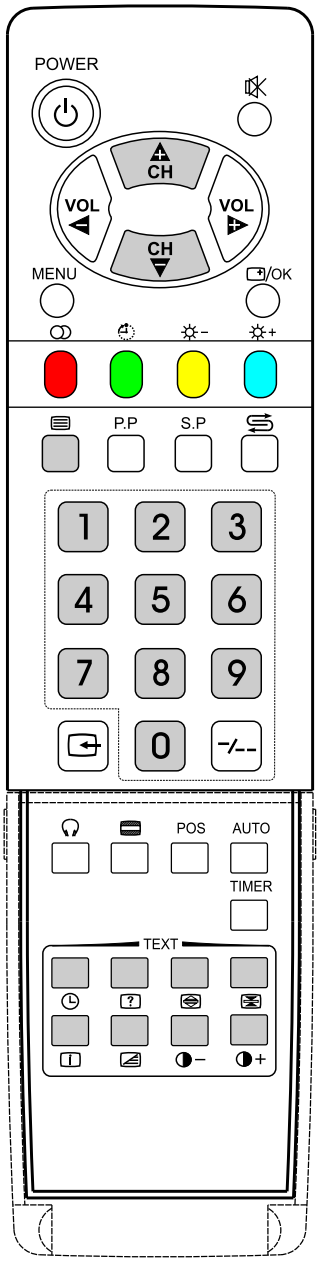


Teletext mode

Teletext is turned on/off with the ▤ button on the remote control unit. You can operate your System in Teletext mode directly by inputting commands with the remote control unit.

Turning on and off Teletext

Select a TV channel or external input source providing the Teletext program.
Press the ▤ button to display the Teletext.
Press the ▤ button again to display the Teletext on the right screen and normal image on the left screen.
Press the ▤ button once more to switch back to TV screen.
Each time you press the ▤ button, the screen switches as right.



Button functions

CH+/- buttons

When viewing the Teletext information
- Press **CH+** to increase the page number.
- Press **CH-** to decrease the page number.

Color (RED/GREEN/YELLOW/BLUE):

You can select a group or block of pages displayed in the colored brackets at the bottom of the screen by pressing the corresponding color (**RED/GREEN/YELLOW/BLUE**) on the remote control unit.

0-9 buttons:

Directly select any page from 100 to 899 by using 0 –9.

REAL CLOCK ◷

Press the button to display the real time on the screen while viewing TV program which carries a teletext broadcasting. Press again to turn off the time display.

REVEAL ?

To reveal hidden information such as an answer to a quiz, press ?. Press the button again to hide the information.

SIZE

Press the button to expand the top half of the display. Press it again to expand the bottom half of the display. Press it once more to resume normal size.

HOLD

Press the button to stop updating Teletext pages automatically. Press it again to release hold mode.

INDEX i

Press the button to display the index page.

MIX

Press the button to superimpose the teletext on a TV picture. Press it again to cancel.

CONTRAST ◑–/◑+

Press the buttons to adjust Teletext contrast.

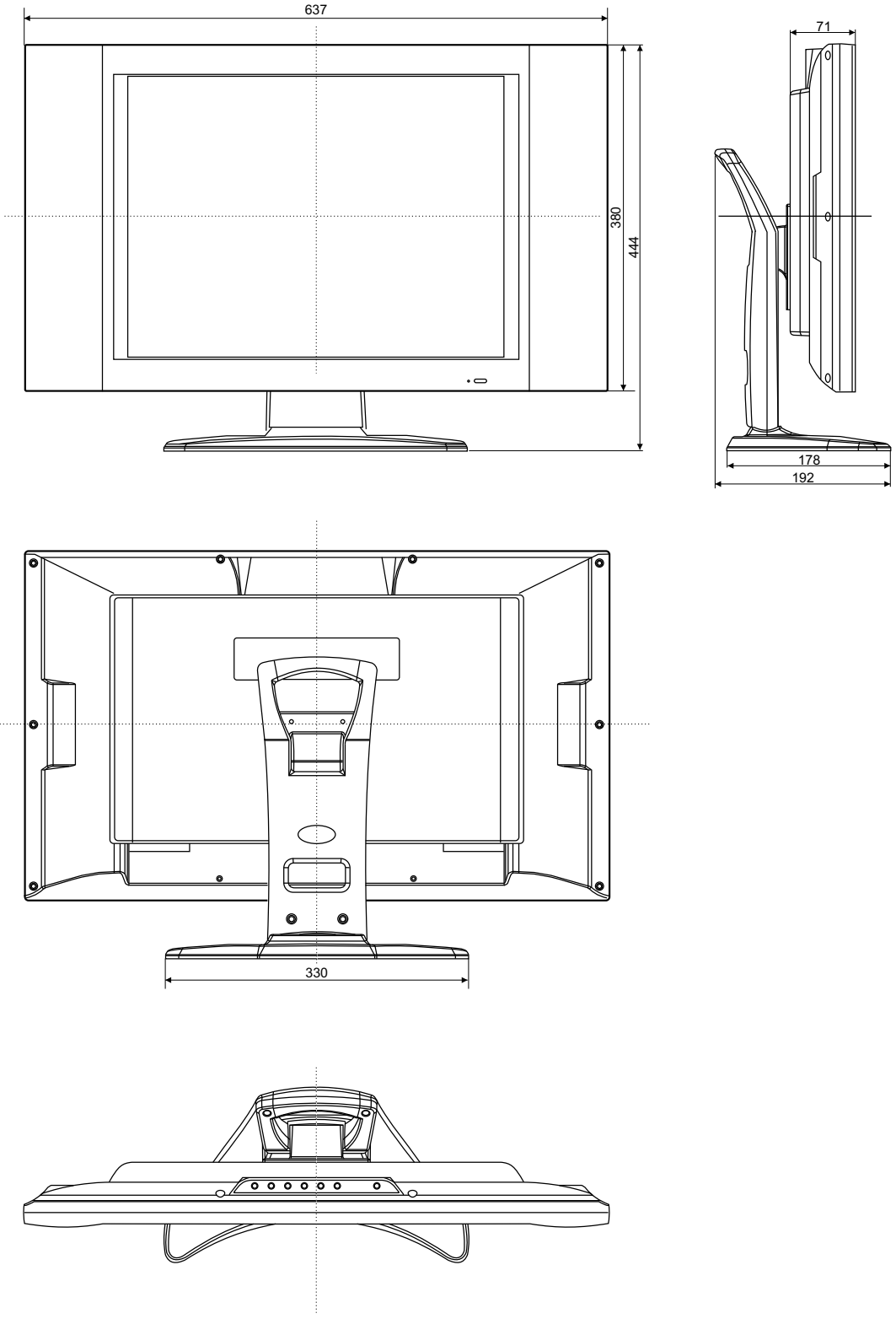
Before calling for repair service, check the following items for possible remedies to an encountered symptom.

Symptoms	Check item
"Ghost" or double images	• This may be caused by obstruction to the antenna due to high rise buildings or hills. Using a highly directional antenna may improve the picture.
No power	• Check that the AC power cord is plugged into the mains socket. • Unplug the power cord, wait for 60 seconds. Then re-insert plug into the mains socket and turn on the unit again.
No picture	• Check antenna connections at the rear of the unit to see if it is properly connected to the unit. • Possible broadcast station trouble. Try another channel. • Adjust the contrast and brightness settings. • Select a correct input. • Is a non-compatible signal being input?
Good picture but no sound	• Increase the VOLUME. • Check that the unit is not muted.
Good sound but poor color	• Adjust the contrast, color and brightness settings.
Poor picture	• Sometimes, poor picture quality occurs when having activated an S-VHS camera or camcorder connected and having connected another peripheral at the same time. In this case, switch off one of the other peripherals. • Check whether the room is too bright
Horizontal dotted line	• This may be caused by electrical interference (e.g. hairdryer, nearby neon lights, etc.) • Turn off the equipment.
Television not responding to remote control	• Check whether the batteries are working. Replace if necessary. • Clean the remote control sensor lens on the unit. • Do not use the remote control under strong or fluorescent lighting. • The batteries should be inserted with polarity (+, -) aligned.
Snowy picture and noise	• Check the antenna connection.
No stable or not synchronized VGA picture	• Check if you have selected the correct VGA mode in your PC.
No output from one of the speakers	• Adjust Balance in the **Audio** menu.

Note:
If your problem is not solved, restart your TV by turning it off and then on again once.
Never attempt to repair a defective TV yourself.

Specifications

Type	LCD TV		
Display Size diagonal	20 "		
Display Feature			
LCD panel	TFT-LCD		
Resolution	800 x600		
Pixel Pitch	0.51mm x 0.51mm		
Maximum Colors	16,700,000		
Brightness	500 nit		
Contrast	500:1		
Viewing Angle	120°/160°		
Response Time	<16 ms		
TV System	PAL/SECAM BG, DK, PAL-I, SECAM-L, SECAM-L',		
Channel Coverage			
System	VHF	UHF	CATV
PAL-D/K	1-12	13-57	Z1~Z37
PAL-B/G	2-12	21-69	X~Z+2, S1~S41
PAL-I	2-12	21-69	
SECAM-B/G	2-12	21-69	X~Z+2, S1~S41
SECAM-D/K	1-12	21-69	
SECAM-L'	2-4		
SECAM-L	5-12	21-69	X~Z C57, S1~S41
Teletext	TOP/FLOF TELETEXT (10 pages)		
Speaker	8W/6 ohm x 2		
AC Adapter Input	AC230~240V, 50Hz		
AC Adapter Output	DC12V		
Power Consumption	55 W		
Unit Weight (kg)	9.5		
Unit Dimensions (WxHxD) (mm)	637 x 444 x 192		
Terminals			
AV1 IN	21-pin EURO-SCART		
AV 2 IN	VIDEO, AUDIO		
S-VIDEO	S-VIDEO		
VGA/AUDIO IN	D-Sub 15-pin/3.5mm Stereo mini phone Jack		
AV OUT	VIDEO, AUDIO		
HEADPHONE	3.5mm Stereo mini phone Jack		
Accessories	1 User Manual,		
	1 AC adapter, 1 AC Power Cord		
	1 Remote Control, 2 AAA Batteries		
	1 Audio/Video Cable,		
Supported Display Format	640 x 480 @ 60Hz	640 x 480 @ 75Hz	
	720 x 400 @ 70Hz		
	800 x 600 @ 60Hz	800 x 600 @ 75Hz	



Design and specifications are subject to change without notice.

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